"This application is related to U.S. Patent Application Serial Number 09/632,558, filed on even date herewith, entitled "WORKSTATION FOR PROCESSING AND PRODUCING A VIDEO SIGNAL" and bearing attorney docket number 1247/A52, naming Jeff S. Ford, Claude Denton, Jeff Belote, and David J. Stradley as inventors, the disclosure of which is incorporated herein, in its entirety, by reference, U.S. Patent Application Serial Number 09/632,452, filed on even date herewith, entitled "SYSTEM AND METHOD FOR PRODUCING A VIDEO SIGNAL" and bearing attorney docket number 1247/A54, naming Jeff S. Ford and Claude Denton as inventors, the disclosure of which is incorporated herein, in its entirety, by reference, U.S. Patent Application Serial Number 09/632,605, filed on even date herewith, entitled "VIDEO CARD WITH INTERCHANGEABLE CONNECTOR MODULE" and bearing attorney docket number 1247/A55, naming Jeff S. Ford and Jeff Belote as inventors, the disclosure of which is incorporated herein, in its entirety, by reference, U.S. Patent Application Serial Number 09/632,443, filed on even date herewith, entitled "SYSTEM AND METHOD FOR FRAME RATE MATCHING" and bearing attorney docket number 1247/A58, naming Jeff S. Ford as inventor, the disclosure of which is incorporated herein, in its entirety, by reference, and U.S. Patent Application Serial Number 09/632,451, filed on even date herewith, entitled "SYSTEM AND METHOD FOR PACKING AND UNPACKING VIDEO DATA" and bearing attorney docket number 1247/A59, naming Jeff S. Ford, Arthur McKinney and Craig Jordan as inventors, the disclosure of which is incorporated herein, in its entirety, by reference."

The paragraph on page 4, lines 17 and 18 has been changed as follows:

"Figure 7 shows an exemplary video graphics workstation for carrying out various exemplary video graphics applications."

The paragraph starting on page 8, line 25 has been changed as follows:

"The common video data format may be an organized bit stream. As noted above, a frame is a single complete image. An image, in turn, is composed of a raster of picture elements, referred to as pixels. A pixel is represented by some number of bits stored, for example, in memory. Pixels are the smallest "units" on a screen that can be given a color (represented with color data) and an opacity (represented with alpha data). Thus, an organized bit stream may include color data, alpha data, or color data and alpha data. For example, a bit stream with color data may include 20-bits for color data. In contrast, a bit stream for alpha data my include 10-bits for alpha data. Pipeline 354 may pre-process color data separate from alpha data. In this embodiment, a color data bit stream may be forwarded on an output different from the output used to forward alpha data."

The paragraphs presented in the specification on page 13, line 20 to page 16, line 9, have been amended as follows:

"In turn, the separation of video output module 650 from video processing module 600 allows for the configuration of various video output modules, each configured to process and produce different video signal formats. Because the "output" functions of video output system 140 have been separated from the "processing" functions of video output system 140, video output module 650 may be "exchanged" without the need to replace video processing module 600. Thus, when a user wants to

output, for example, a serial digital component video signal instead of an analog composite video signal, the user "exchanges" the video output module configured for the analog composite video signal with a video output module configured for the serial digital component video signal. In turn, processor 654 (on the "new" video output module) signals video processing module 600 of the new configuration.

As an interchangeable connector module, video output module 650 may be mounted on video processing module 600, a processing module, in the manner shown in Figures 4a and 4b.

D. Exemplary Video Graphics Applications

Figure 7 shows an exemplary video graphics workstation implementing one embodiment of the invention for carrying out various exemplary video graphics applications. In this embodiment, video input system 730 includes two pipelines, pipeline 732 and pipeline 734. In addition, video output system 750 forwards a formatted video signal to a video tape recorder for recordation.

In one application, video graphics workstation 700 captures a live video signal. First, video graphics workstation 700 receives the live video signal. Next, the received video signal is pre-processed in pipeline 732 of video input system 730. Then, the pre-processed video signal is forwarded, via the 64-bit PCI bus, to storage medium 720.

In another application, video graphics workstation 700 captures and displays a live video signal. First, video graphics workstation 700 receives the live video signal. Next, the received video signal is pre-processed in both pipeline 732 and pipeline 734 of video input system 730. Then, the pre-processed video signal from pipeline 732 is forwarded, via the 64-bit PCI bus, to storage medium 720. In the interim, the pre-processed video signal from pipeline 734 is forwarded, via local bus 782, to video graphics processor 740 for display on computer monitor 760. The pre-processed video

signal from pipeline 734 may also be forwarded to video graphic processor 740 via the 64-bit PCI bus and the AGP. In alternate embodiments, the pre-processed video signal from pipeline 734 may be forwarded, via the 64-bit bus and the 32-bit bus, to video output system 750 for recordation on video tape recorder 770.

In another application, video graphics workstation 700 plays back a stored video signal. First, video graphics workstation 700 forwards a stored video signal, via the 64-bit PCI bus to video input system 730. Next, the stored video signal is pre-processed in pipeline 732. Then, the pre-processed video signal is forwarded, via local bus 782, to video graphics processor 740 for display on computer monitor 760. In an alternate embodiment, the pre-processed video signal may also be forwarded, via local bus 784, to video output system 750 for recordation on video tape recorder 770.

In another application, video graphics workstation 700 processes a stored video signal, for example, performs a two-dimensional or three-dimensional effect on the stored video signal, and displays the processed video signal. First, video graphics workstation 700 forwards a stored video signal, via the 64-bit PCI bus, to video input system 730. Next, the stored video signal is pre-processed in pipeline 732. Then, the pre-processed video signal is forwarded, via local bus 782, to video graphics processor 740 for "effects" processing and display on a computer monitor 760. In an alternate embodiment, the processed video signal may also be forwarded, via local bus 784, to video output system 750 for recordation on video tape recorder 770.

In another application, video graphics workstation 700 pre-processes a stored video signal and saves the pre-processed video signal. First, video graphics workstation 700 forwards a stored video signal, via the 64-bit PCI bus, to video input system 730. Next, the stored video signal is pre-processed in pipeline 732. Then, the pre-processed video signal is forwarded, via the 64-bit PCI bus, to storage medium 720. In alternate

embodiments, the pre-processed video signal may be forwarded, via the 64-bit PCI bus, to central processing unit 715 or to memory 710.

In another application, video graphics workstation 700 processes a stored video signal and saves the processed video signal. First, video graphics workstation 700 forwards a stored video signal, via the 64-bit PCI bus, to video input system 730. Next, the stored video signal is pre-processed in pipeline 732. Then, the pre-processed video signal is forwarded, via local bus 782, to video graphics processor 740 for "effects" processing. Last, the processed video signal is forwarded, via local bus 782, to video input system 730. Video input system 730 may pre-process the processed video signal, for example, to convert the processed signal to a format better suited for saving, or forward the processed signal, via the 64-bit PCI bus, to storage medium 720.

In another application, video graphics workstation 700 combines a live video signal, a stored video signal, and graphics information and records the combined video signal. First, video graphics workstation 700 receives a live video signal. Next, the received video signal is pre-processed in pipeline 732 of video input system 730. In the interim, video graphics workstation 700 forwards a stored video signal to video input system 730. Next, the stored video signal is pre-processed in pipeline 734. Then, graphics information (via the AGP), the pre-processed video signal from pipeline 732 (via local bus 782), and the pre-processed video signal from pipeline 734 (via local bus 782) are forwarded to video graphics processor 740 for "effects" processing. Last, the processed video signal is forwarded, via local bus 784, to video output system 750 for recordation on video tape recorder 770."